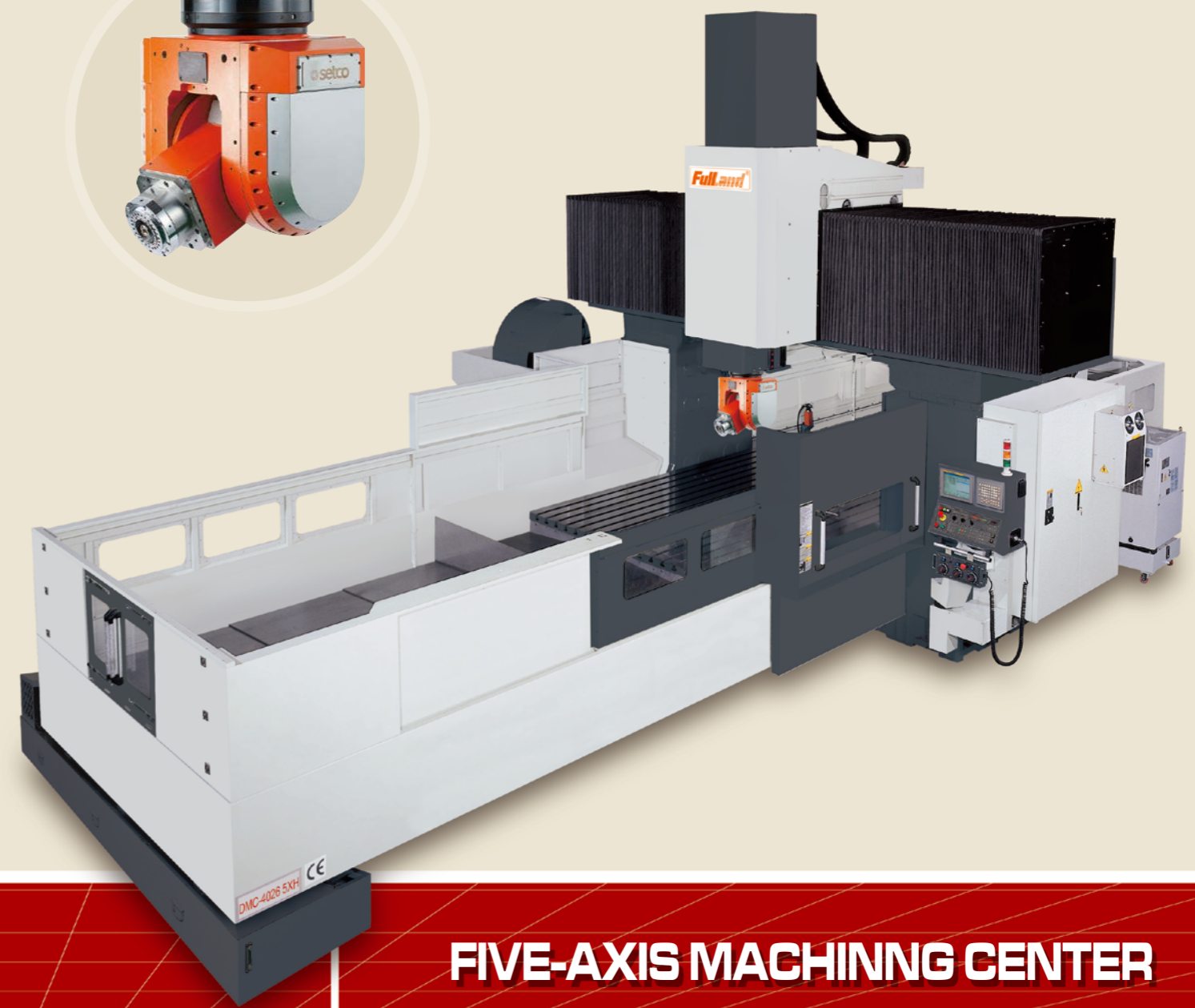


FullLand®

Work Pieces



FIVE-AXIS MACHINING CENTER

Feature 4H+1R

- High Precision
- High Rigidity
- High Performance
- High Speed
- Reliable

Awarded as A Proof of Excellence In Technical



Taiwan Machine Tools Industry Award 2007 For Excellence in Research and Innovation NC Lathe SECOND PRIZE
 TEN MOST EXCELLENT INVENTER IN TAIWAN
 Taiwan Machine Tools Industry Award 2007 For Excellence in Research and Innovation Machining Center FIRST PRIZE
 GOLD HAND AWARD
 NATIONAL TECHNOLOGY INNOVATION AWARD 2008

FullLand®

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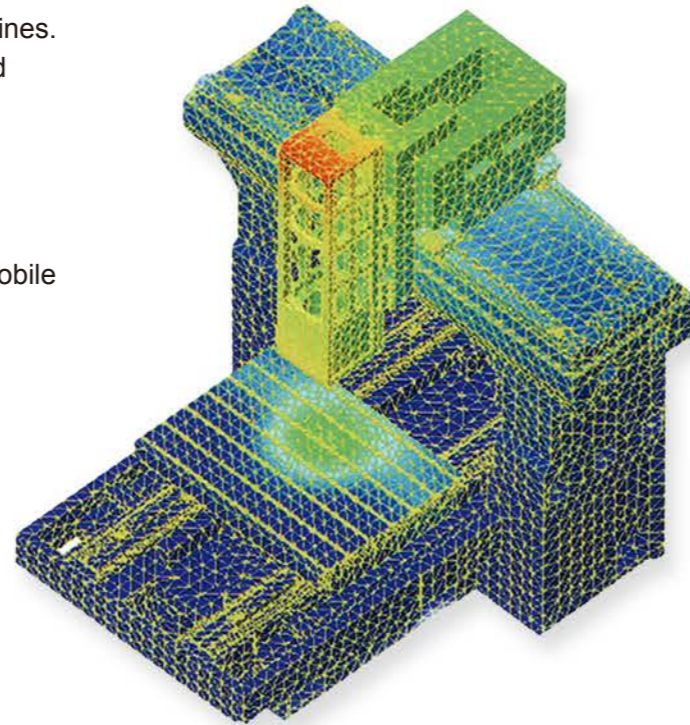


Optimum structure of **GEOTECH DMC-SERIES** is designed by an excellent and experienced team of engineers. Using Finite Element Scheme with ANSYS SOFTWARE to ensure rigidity of machines. After the completion of assembling of whole machine, related geometric and kinematics tests are via precise instruments performed.

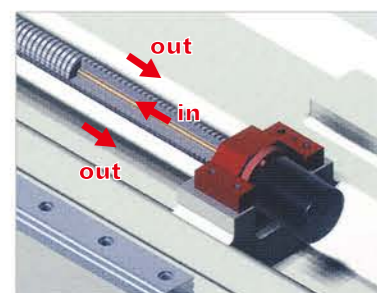
DMC-SERIES suit for 3-C products (Consumer Electronics, Communications and Computers) as well as complicated parts and moulds for injection, automobile and aerospace industries.

Patent approved by Germany, Taiwan, China.

- | | |
|---|---|
| <p>■ GERMANY PATENT NO.</p> <p>1. 20 2004 017 403.0
2. 20 2004 019 862.2
3. 20 2004 019 861.4</p> <p>■ CHINA PATENT NO.</p> <p>1. 676573</p> <p>■ JAPAN PATENT NO.</p> <p>1. 3108878</p> | <p>■ TAIWAN PATENT NO.</p> <p>1. M255100 7. M284474
2. M255096 8. M284473
3. M257251 9. M290444
4. M281740 10. M294382
5. M281742 11. M294988
6. M284464 12. M296091
13. M297805</p> |
|---|---|



Work Pieces



Ball Screw Cooling System

Schematic drawing of internal cooling hollow ball screw

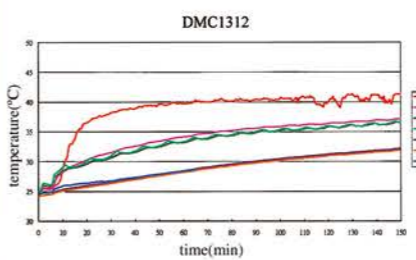
There is cooling provided throughout the DMC series including: Oil cooled guide ways, ball screws, spindle, spindle motor and bridge. Additionally there is a thermal compensation system which automatically adjusts the machine to compensate for thermal deviations which could affect cutting accuracy. (Standard for travel under 4M)

Accuracy & Rigidity Test

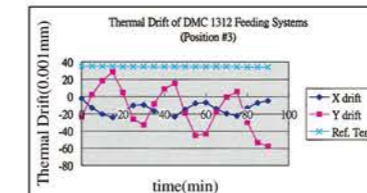
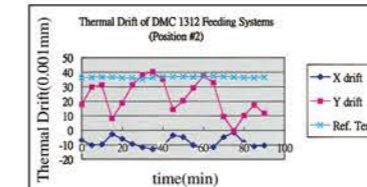
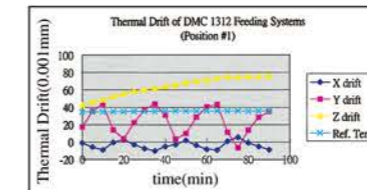
- Axis Traverse Acceleration Test
- Modal Test
- Spindle Rotation Vibration Test
- Spindle Radial and Axial Error Motion Test
- Spindle Thermal Stability Test
- Thermal Drift Testing of Feeding Mechanisms



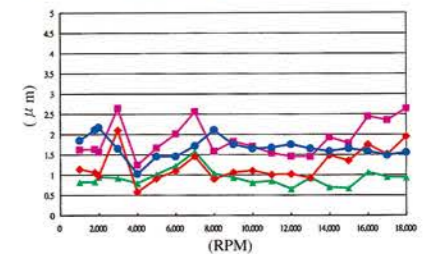
Spindle Thermal Stability Test



Thermal Drift Testing of Feeding Mechanisms

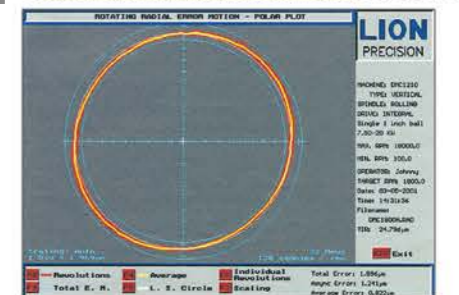


Spindle Radial and Axial Error Motion Test

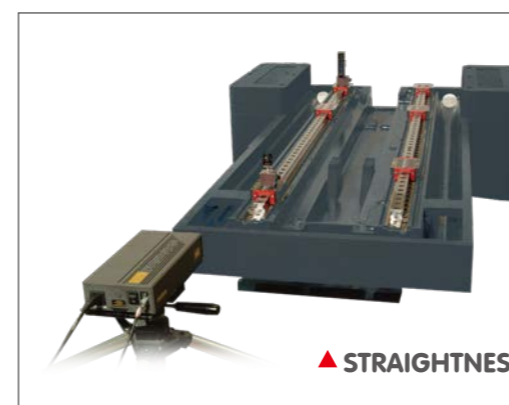


DMC1312 Testing Result of Spindle Radial and Axial Error Motion Under Various Speed.

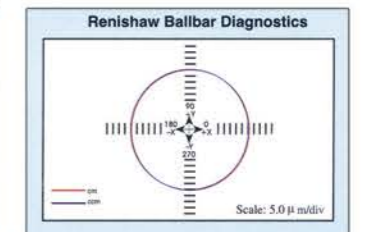
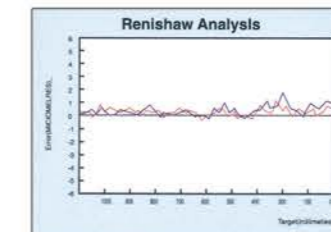
Spindle Radial and Axial Error Motion Test



High Accuracy Inspection ensure the life of machine



100% pitch error inspected by laser unit. 100% dynamic traverse inspected.



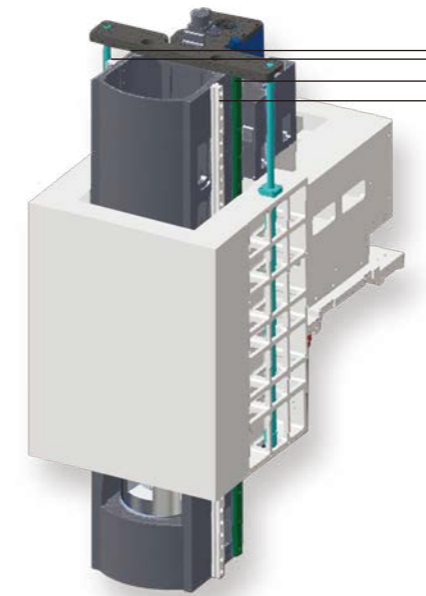
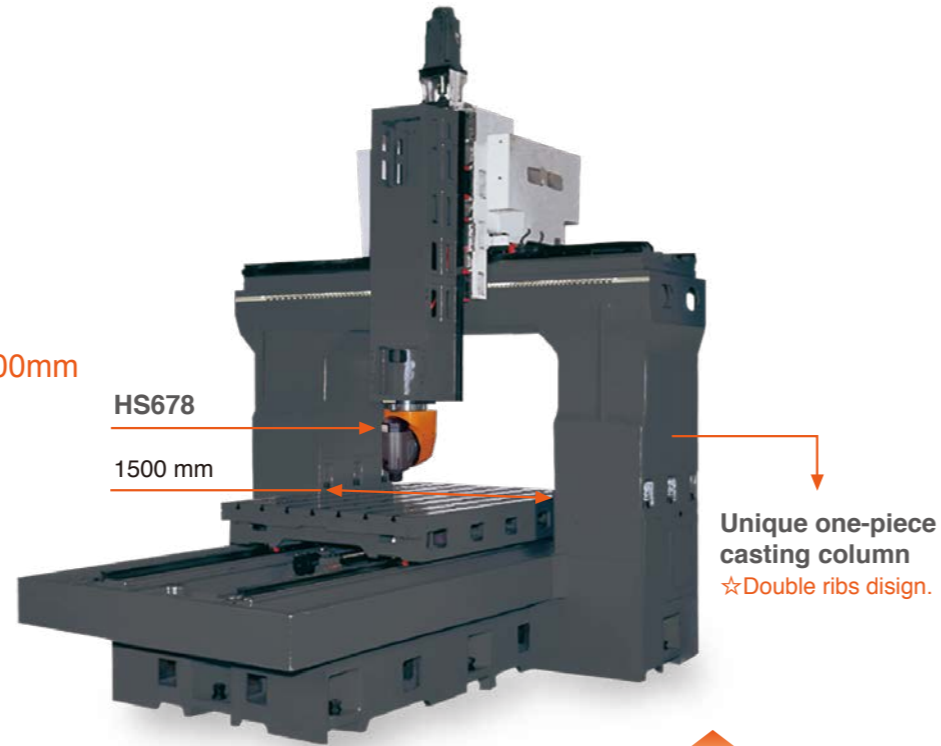
Reference Standards: VD13441 Positioning Accuracy: 0.004 / 300mm Repeatability: ±0.002mm

THE ABOVE ARE DATA WITHOUT LINEAR SCALE WHEN TESTING IN A NORMAL ROOM TEMPERATURE.

▲ STRAIGHTNESS





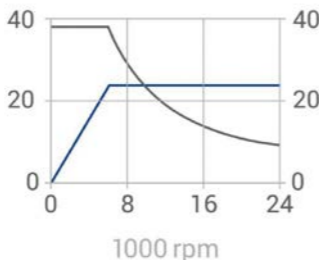
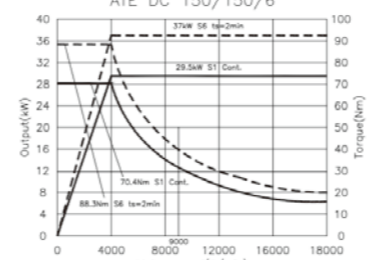
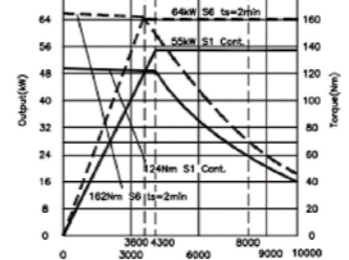
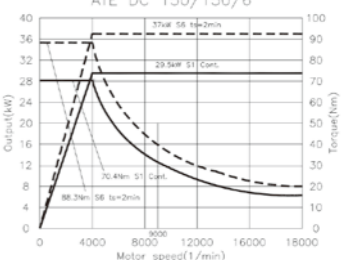
DMC -2015-5XH

- X-axis: 1800mm
- Y-axis: 1300mm
- Z-axis: 700mm
- Distance between columns: 1500mm
- Rigid body



4 LINEAR ROLLER GUIDEWAYS

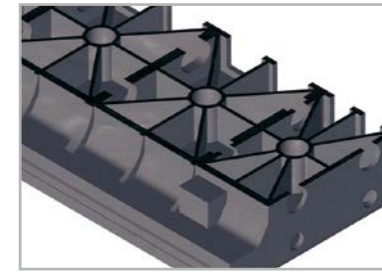
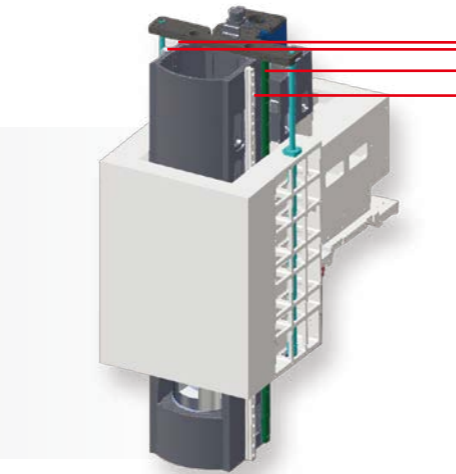
Mounting Four pieces of Linear Roller Guideways on Z axis so that the Radial & Axial strength is double and machining efficiency increased.
Surface finish < 0.5umRa
PATENT NO. M281740

Model	HSD-H678		C67		C68		C66	
Description								
Tool Interface	HSK A63		HSK A100		HSK A63		HSK A63	
Max. Spindle Speed	18000 rpm		10000 rpm		18000 rpm		15000rpm	
Spindle Power	29.5kW S1 cont. / 37kW S6 2min.		55kW S1 cont. / 64kW S6 2min.		29.5kW S1 cont. / 37kW S6 2min.		55kW S1 cont. / 64kW S6 2min.	
Spindle Torque	70.4Nm S1 cont. / 88.3Nm S6 2min.		124Nm S1 cont. / 162Nm S6 2min.		70.4Nm S1 cont. / 88.3Nm S6 2min.		124Nm S1 cont. / 162Nm S6 2min.	
Spindle Lubrication	Oil air		Grease		Oil air		Grease	
A/C max. torque	993 Nm		C : 1320 Nm / A : 1228 Nm		993 Nm		C : 1320 Nm / A : 1228 Nm	
A/C clamping torque	2000 Nm		2000 Nm		2000 Nm		2000 Nm	
A/C rotary angle	C : ±220° / A : ±115°		C : ±220° / A : ±100°		C : ±220° / A : ±115°		C : ±220° / A : ±100°	
Measuring System	絶対式		絶対式		絶対式		絶対式	
Precision Of Positioning	±2"		±2"		±2"		±2"	
Function	CTS		CTS		CTS		CTS	
Volume L×W×H	650 ×400×1200 mm		430 × 690×1550 mm		650 ×400×1200 mm		430 × 690×1550 mm	
								

Art Fulland High Speed, High Precision Bridge-Type Machining Center

Different from the common twin slide ways, four slide ways on the spindle head ensure the spindle head rigidity and multi-function application.

Taiwan Patent No.: M281740
Taiwan Patent No.: M294988



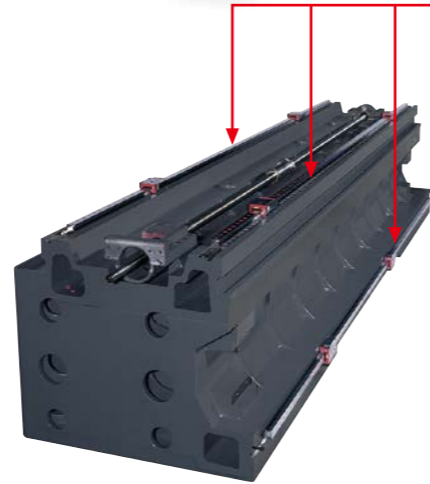
The radial ribbing design absorbs both the radial and axial forces to achieve rigid machine.

Germany Patent No.: 2020040198622
Taiwan Patent No.: M225096

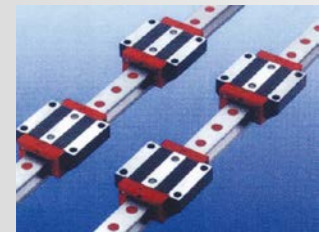


Taiwan's first origin by Fulland, mount 3 pieces of roller linear guides to enable the rapid traverse easily.

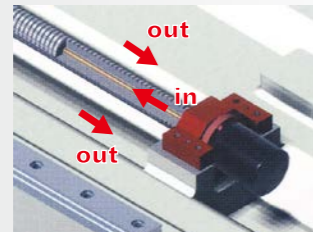
Saddle supported by 3 pieces of roller linear guides, machining rate is increased by 25%.



Germany Patent No.: 2020040174030
Japanese Patent No.: 310B878
China Patent No.: 676573
Taiwan Patent No.: M257251
Spain Patent No.: 1059432



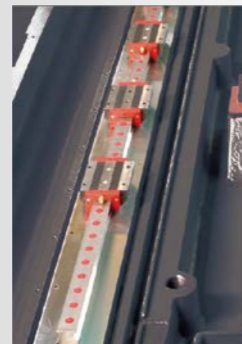
Schneberger or Same Grade Roller Guide



Oil Cooling System for X,Y-axes Ball Screws



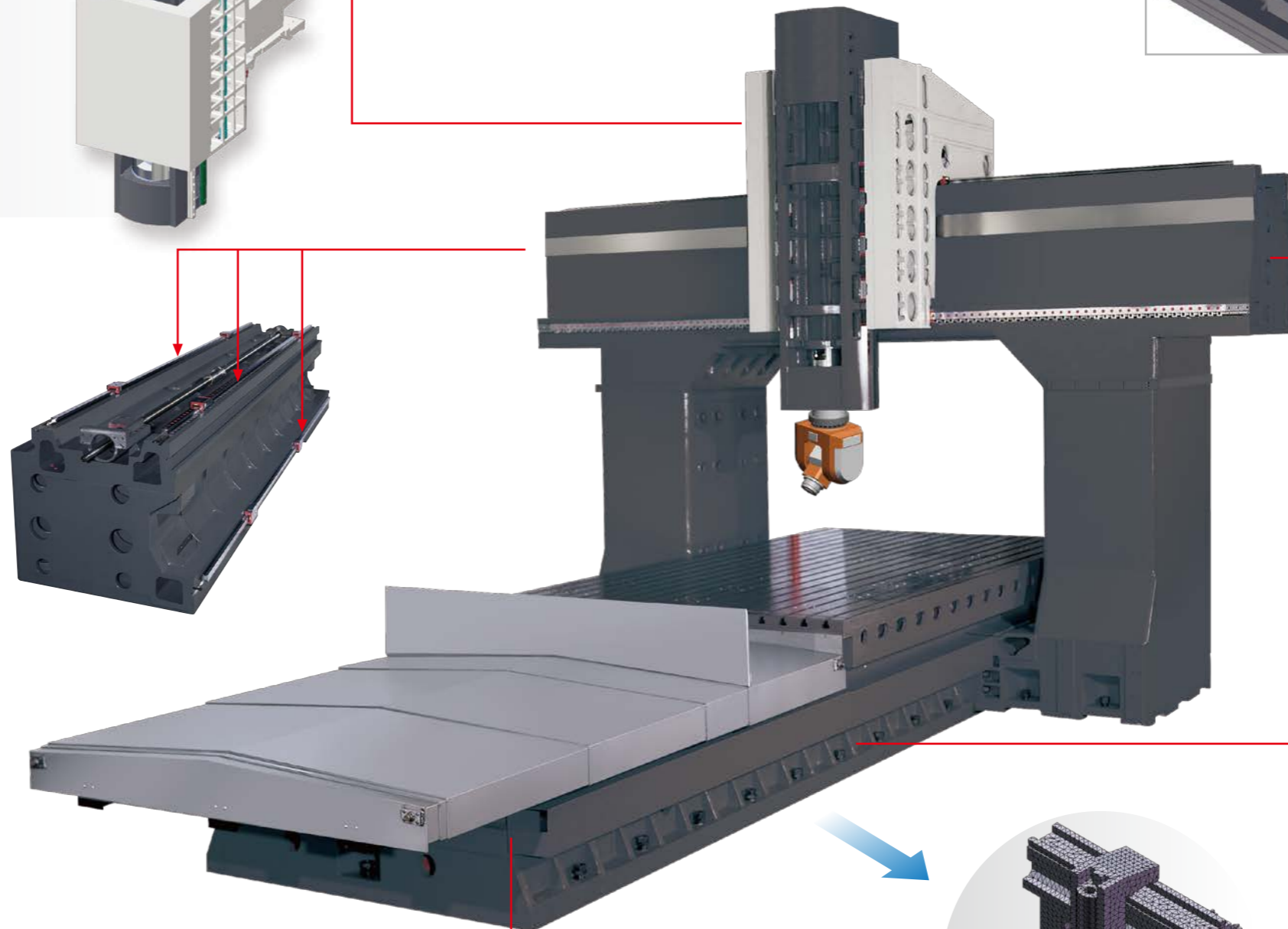
X-axis with double ball screws ensure position accuracy and repeatability. (Column: 3000mm above)



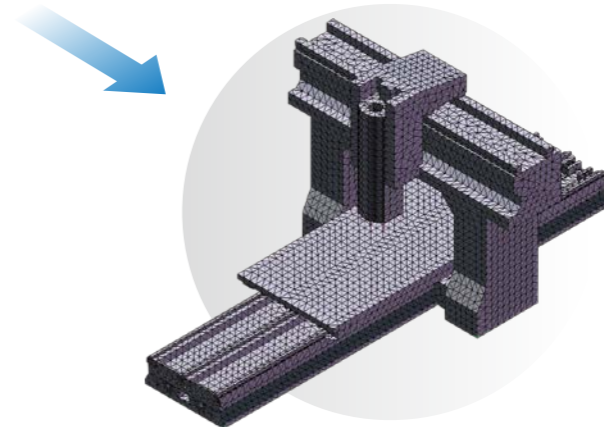
Pollution-preventive mechanism on the bed.



Germany Patent No.: 2020040198614
Taiwan Patent No.: M225100



The large number and close spacing of the leveling screws on the base provides stable and even support for the machine structure.



Machine structure with Double Column and optimized using Finite Element Analysis to achieve its high rigidity and resistance to torsional stress

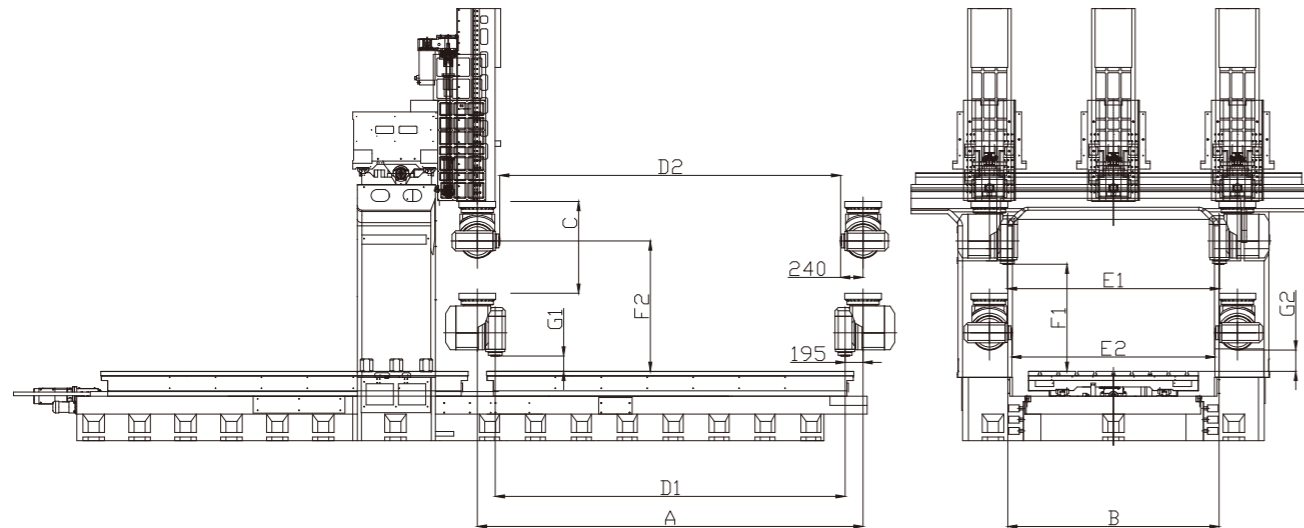
DESCRIPTION	DMC-4025	DMC-5025	DMC-5035	DMC-6030	DMC-6040	DMC-7035	DMC-8040
Table size / mm	4200x2200	5200x2200	5200x3200	6200x2700	6200x3700	7200x3200	8200x3700
X/Y/Z axis / mm	4000/2400/1000	5000/2400/1000	5000/3400/1000	6000/2900/1000	6000/3900/1200	7000/3400/1200	8000/3900/1200

A Brand New Model of Five-Axis Machining Center

- Rigid and reliable special designed two-angular rotational spindle.
- Unique one-piece casting for the Double Column and Cross Rail design.
- Fully supported interface between Double Column and Base to prevent vibration during cutting.
- Firmly mounted linear guideways on three axes.
- Modularized design to meet the requirement from different applications and easy maintenance.
- Low inertia and high rigidity structure.
- Fully-tested reliable mechanism.



- The A and C axes are designed to fix on the Z-axis trail to enlarge working area.
- The rotational spindle possesses the positioning ability at any desired angle to perform the normal cutting for any complex surfaces of working piece. Meanwhile, this arrangement can reduce the travel path and the weariness of tools.
- X axis sideway mounted on the top of cross rail to shorten the distance from the spindle head to the X axis sideway.



C67 Two-Axis Milling Head • Precision Of Positioning = 10" / 10" • Max. Speed = 15000/18000 rpm • Precision Of Repeatability = ±3" / ±3"

Distance Between Column	Height of column	A	B	C	D	E	F	G
mm	mm	mm	mm	mm	mm	mm	mm	mm
1500	1330	X axis travel	Y axis travel	700	D1=A-390, D2=A-480	E1=B, E2=B	F1=960, F2=1220	G1=260, G2=330
1800	1430	X axis travel	Y axis travel	900	D1=A-390, D2=A-480	E1=B, E2=B	F1=1060, F2=1320	G1=160, G2=230
2200	1530	X axis travel	Y axis travel	1000	D1=A-390, D2=A-480	E1=B, E2=B	F1=1160, F2=1420	G1=160, G2=230
2600	1530	X axis travel	Y axis travel	1000	D1=A-390, D2=A-480	E1=B, E2=B	F1=1160, F2=1420	G1=160, G2=230
3000	1530	X axis travel	Y axis travel	1000	D1=A-390, D2=A-480	E1=B, E2=B	F1=1160, F2=1420	G1=160, G2=230

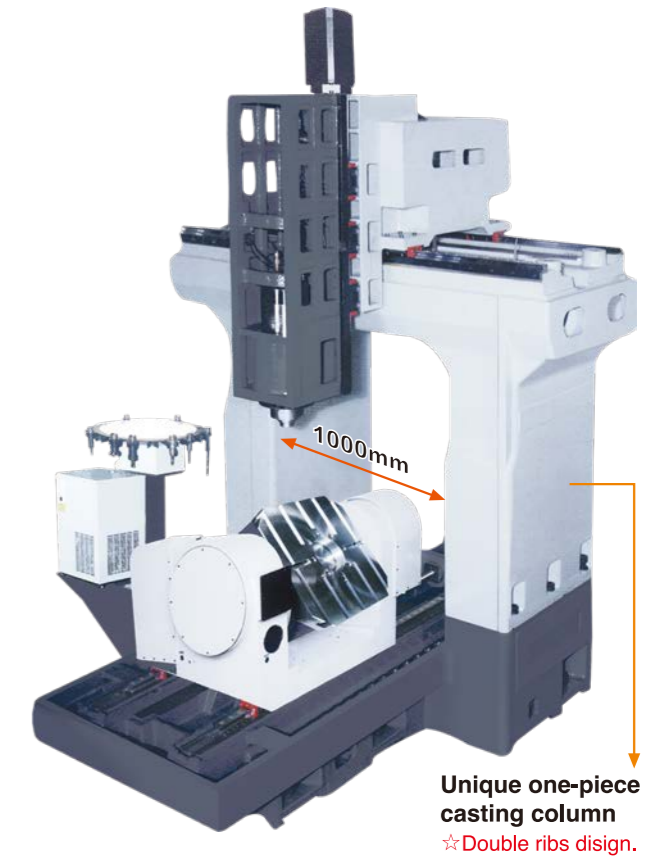
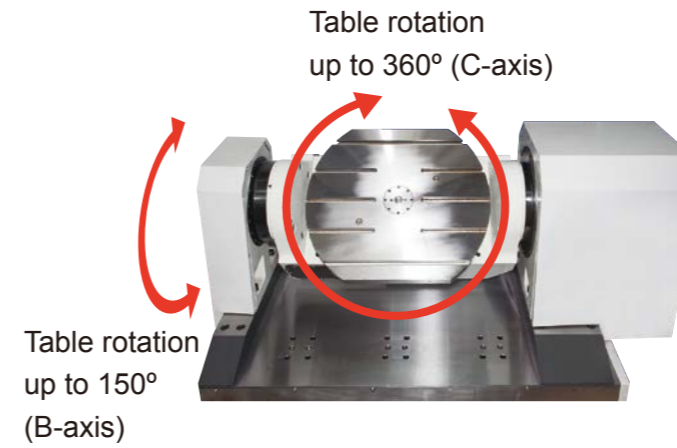
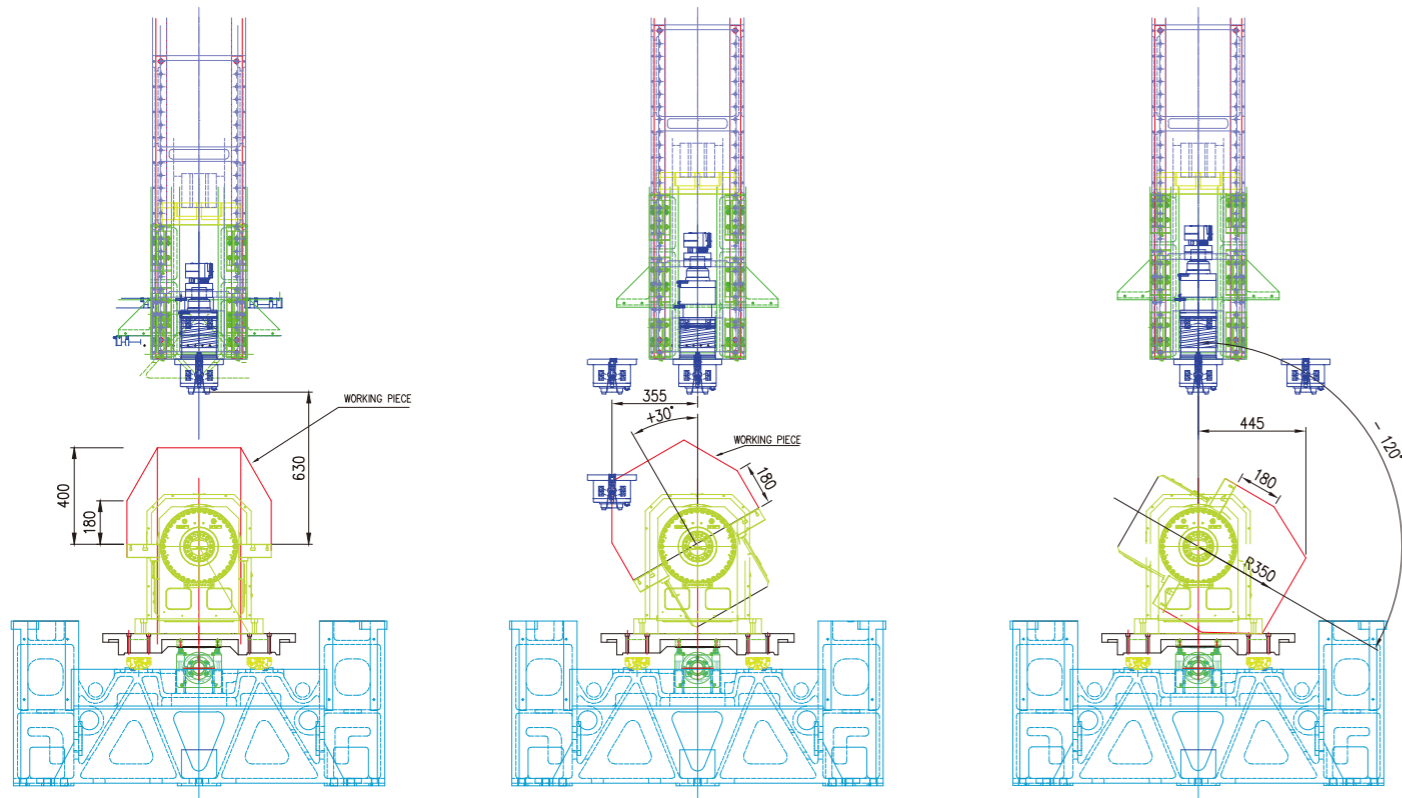
SPECIFICATION

DESCRIPTION	UNIT	DMC-2015-5XH	DMC-2615-5XH	DMC-2518-5XH	DMC-3018-5XH	DMC-3022-5XH	DMC-4022-5XH	DMC-5022-5XH	DMC-5026-5XH	DMC-4030-5XH	DMC-6030-5XH
Travel											
X axis	mm/inch	2000/78.7"	2500/98.4"	2500/98.4"	3000/118"	3000/118"	4000/157.5"	5000/196.9"	5000/196.9"	4000/157.5"	6000/236.2"
Y axis	mm/inch	1350+480 (53.1"+18.8")	1350+480 (53"+18.8")	1700+480 (66.9"+18.8")	1700+480 (66.9"+18.8")	2100+480 (82.6"+18.8")	2100+480 (82.6"+18.8")	2100+480 (82.6"+18.8")	2500+480 (98.4"+18.8")	2900+480 (114"+18.8")	2900+480 (114"+18.8")
Z axis	mm/inch	700/27.6"	700/27.6"	900/35.4"	900/35.4"	1000/39.4"	1000/39.4"	1000/39.4"	1000/39.4"	1000/39.4"	1000/39.4"
Distance between columns	mm/inch	1500/59.1"	1500/59.1"	1800/70.9"	1800/70.9"	2200/86.6"	2200/86.6"	2200/86.6"	2600/102.4"	3000/118"	3000/118"
Table											
Dimension	mm/inch	2000x1200 (78.7"x47.2")	2700x1200 (106.3"x47.2")	2700x1700 (106.3"x47.2")	3200x1700 (126"x47.2")	3200x1800 (126"x70.8")	4200x1800 (165.4"x70.8")	5200x1800 (204.7"x70.8")	5200x2150 (204.7"x84.6")	4200x2700 (165.4"x106.3")	6200x2700 (244"x106.3")
Working area (without tool length)	mm/inch	1520x1350 (59.8"x53")	2120x1350 (83.5"x53")	2020x1700 (79.5"x66.9")	2520x1700 (99"x66.9")	2520x2100 (99"x82.6")	3520x2100 (138.5"x82.6")	4520x2100 (178"x82.6")	4520x2500 (178"x98.4")	3520x2900 (138.6"x114.2")	5520x2900 (217.3"x114.2")
T-Slot (W*No.*CD)	mm	22x7x125	22x7x125	22x9x200	22x9x200	22x10x200	22x10x200	22x10x200	22x11x200	28x14x200	28x14x200
Max. Table load	kgs/lbs	3000/6600	8000/17600	6200/13640	6200/13640	10000/22000	12000/26400	15000/33000	18000/39600	15000/33000	20000/44000
Spindle											
Spindle speed (Built-in type)	rpm	24000 RPM / 12000 RPM									
Spindle motor (Built-in type) / Torque Max.	kw/NM	24kw / 38.2NM 64kw / 124NM									
Spindle Taper		HSK A63 / HSK A100									
Feedrate											
Cutting feed	mm	1-10,000 (DEPENING ON CONTROLLER)									
X/Y axis rapid traverse (o.p.)	M	24(36)	24(36)	24(36)	20	20	20	16	16	16/16	16/16
Z axis rapid traverse (o.p.)	M	15	15	15	12	12	12	12	12	12	10
X axis servo motor Y/Z axis servo motor (X/Y/Z axis with Gear reducer)	NM	HEIDENHAIN : X, Y axis: QSY-190D 9.6kw 38NM Z axis: QSY-190C 7.2kw 28NM(+Nitrogen balance)					HEIDENHAIN : X, Y axis: QSY-190D 9.6kw 38NM (+ Gear Reducer) Z axis: QSY-190C 7.2kw 28NM(+Nitrogen balance)				
		SIEMENS : X,Y axis: 1FK7103 5.37kw 36NM Z axis: 1FK7101 4.87kw 27NM (+Nitrogen balance)					SIEMENS : X,Y axis: 1FK7103 5.37kw 36NM (+ Gear Reducer) Z axis: 1FK7101 4.87kw 27NM (+Nitrogen balance)				
Linear guide (Roller Type)											
X axis	mm	X:45x2sets		X:55x2sets		X:65x2sets			X:65x2sets		
Y axis	mm	X:45x2sets + 25x1set		X:45x2sets + 25x1set		X:45x2sets + 35x1set			X:45x2sets + 35x1set		
Z axis	mm	X:45x2sets		X:55x2sets		X:55x2sets + 45x2sets			X:55x2sets + 45x2sets		
Ballscrew											
X axis ballscrew dia * pitch	mm	50 x 12	50 x 12	55 x 12	55 x 16	63 x 16	63 x 16	80 x 16	80 x 12	63 x 12	80 x 10
Y axis ballscrew dia * pitch	mm	50 x 12	50 x 12	50 x 12	50 x 12	50 x 12	50 x 12	50 x 12	50 x 12	55 x 12	55 x 12
Z axis ballscrew dia * pitch	mm	45 x 10					45 x 12				
A.T.C.											
Type of tool (HSK63A/BT40)	Armless	Armless type									
Tool capacity		12(OP) 16/20									
Type of tool (for BT40/BT50)	Arm	24/30 (Disc type) 32/40/60/80/120 (Chain type)									
Tool capacity											
Maximum tool diameter	mm/inch	24T(BT40) : 78(3.1") / 24T(BT50) : 110(4.3")									
Maximum tool length	mm/inch	24T(BT40) : 300(11.8") / 24T(BT50) : 350(13.8")									
Maximum tool weight	kgs/lbs	8(17.6) / 20(44)									
Tool to tool time	sec	1.8 / 2.5									
Air supply	Kg/cm2	6	6	6	6	6	6	6	6	6	6
Power supply	KVA	35	35	35	35	45	45	45	45	45	45
Coolant pump	HP	1HP x 2pcs									
Machine weight (net)	kgs/lbs	21200/46640	21200/46640	26500/58300	28500/62700	32000/70400	36500/80300	41000/90200	50000/110000	68000/149600	92000/202400
Raiser block 200mm (o.p.)	mm	310-895	310-895	x	x	x	x	x	x	x	x
Raiser block 500mm (o.p.)	mm	610-1195	610-1195	x	x	x	x	x	x	x	x



DMC-980-5XT

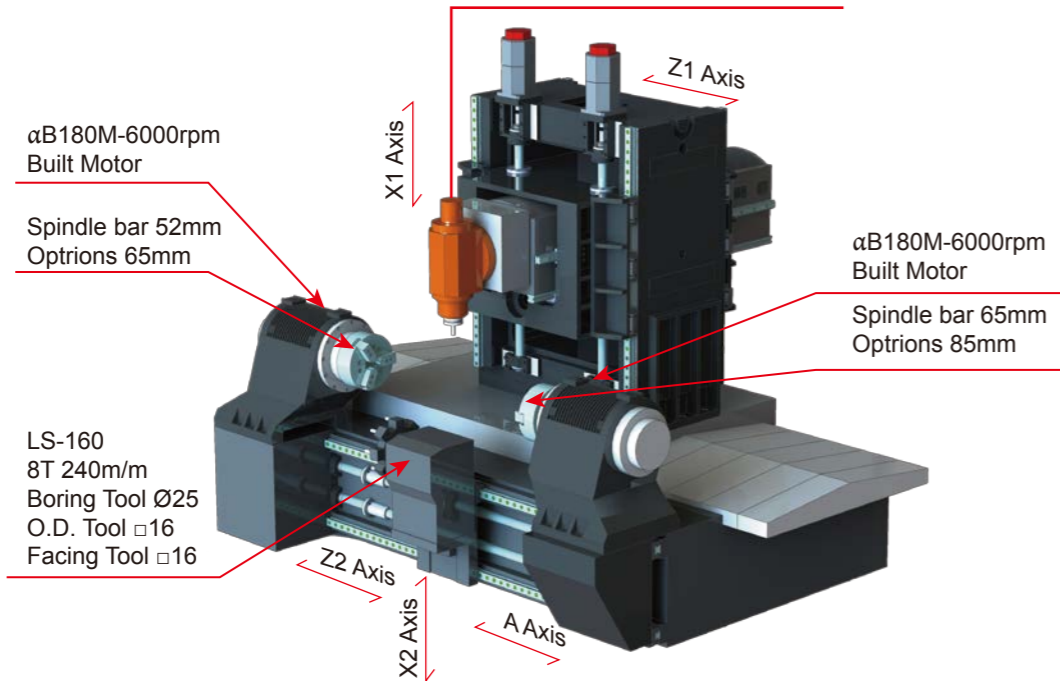
- X-axis: 630mm
- Y-axis: 630mm
- Z-axis: 550mm
- Distance between columns: 1000mm



		FullLand DMC-980-5XT	DMC-1215-5XT
ROTARY TABLE	Size	ø600mm (23.6")	ø800mm (31.5")
	Max. loading weight	500kg	1200kg
TRAVEL	X-axis	630mm (24.8")	1000mm (39.4")
	Y-axis	630mm (24.8")	1000mm (39.4")
	Z-axis	480mm (18.9")	700mm (27.6")
	A-axis	+30°-120°	+30°-120°
	C-axis	360°	360°
	Distance between Columns	1000mm (39.4")	1500mm (59.1")
SPINDLE	Table surface to spindle nose	120-600mm (4.7"-23.6")	100-800mm (4.1"-31.5")
	Spindle taper	BT-40 HSK-A63(Opt)	BT-40 HSK-A63(Opt)
	Spindle speed (Direct Drive)	12000rpm(Std) / 15000rpm(Opt)	12000rpm(Std) / 15000rpm(Opt)
	Spindle Motor / Kw	10/12.5 kW	10/12.5 kW
	Spindle speed (Build in Type)	18000rpm(BT-40) / 30000rpm(BT-30)	18000rpm(BT-40) / 30000rpm(BT-30)
FEEDRATE	Spindle Motor / Kw	19.4kw / 8.2kw	19.4kw / 8.2kw
	Rapid traverse X/Y/Z	36/36/30 m/min	36/36/30 m/min
	Rapid traverse A/C	25/33 rpm	50/100 rpm
	Max. cutting feed	20 m/min	20 m/min
	Guide way	Linear guide way	Linear guide way
ATC	Tool type	BT-40	BT-40
	Magazine capacity	ARM-24T	ARM-24T
	Max. tool length(mm)	300	300
	Max. tool diameter(w/adjacent tool)	78	78
	Max. tool weight	8	8
DIMENSION	Width x Depth	3520x3420 mm (138.5" x 134.6")	
	Machine height	3300mm (129.9")	4000mm (157.5")
	Machine weight	9,000kg / 19,841 lbs	17000kg / 37,478 lbs

GMTC-168

FANUC 112M/HSK-A63/13000rpm
 FANUC 160LL/HSK-A100/10000rpm
 B AXIS:±120°



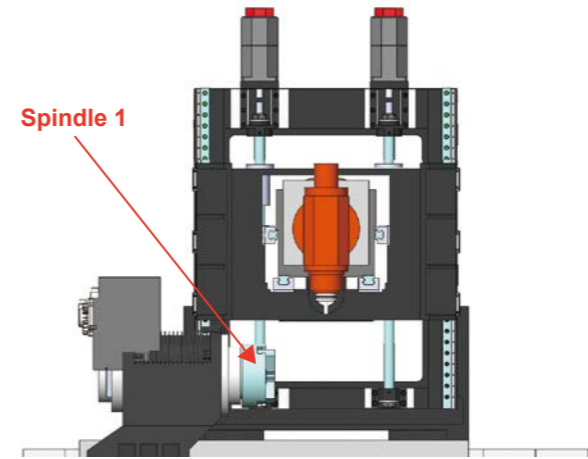
Machine Structure Designed and Refined by FEM Analysis

The most important benefit provided by integrated mill turn centers is the process integration. A wide range of machining variations can be performed, from raw material to completion, with one setup, dramatically improving productivity.

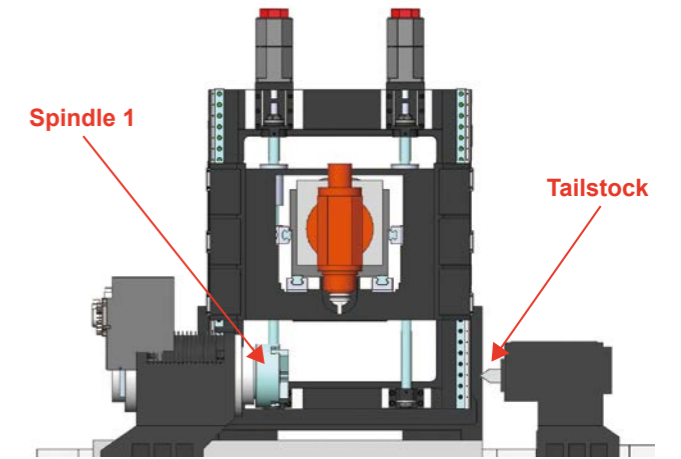
Milling	O.D. milling	O.D. hole machining	Ball-end milling	Angular machining (deburr) B-axis -100° B-axis +100°
Spindle 2	Cut-off 700mm	Face cutting	Angular machining (deburr) B-axis ±100°	End face hole machining and tapping
Turning	O.D. cutting	Drilling B-axis 90°	I.D. cutting B-axis 90°	I.D. threading B-axis 90°
Turret 2 machining example	Od machining using the center	Hobbing using the tool spindle and turret 2	Face milling using the center	Drilling using a hydraulic steady rest

INTELLIGENCE MACHINERY

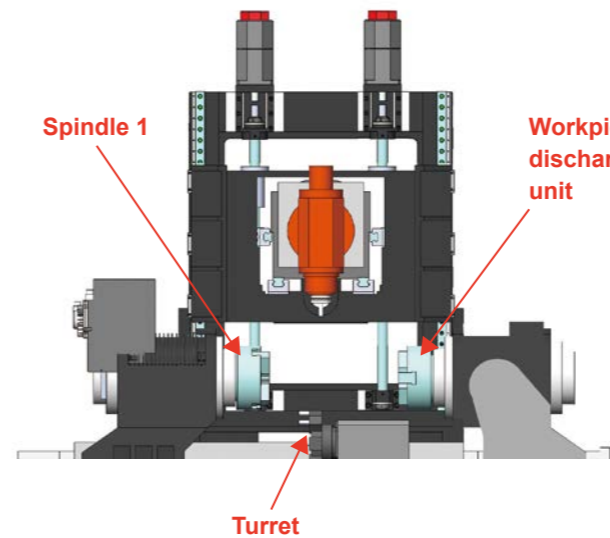
F



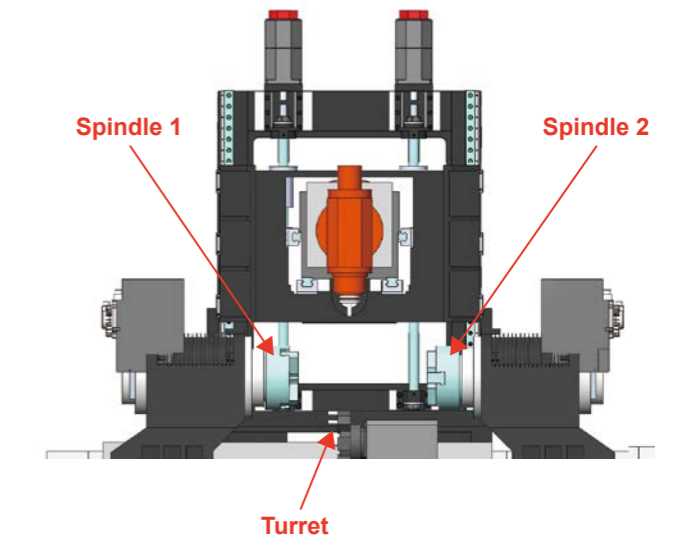
U



L LA LAN



D DA DAN



Variations:

Specifications	F	U	L	LA	LAN	D	DA	DAN
Spindle 1	●	●	●	●	●	●	●	●
Tailstock	○	●	○	○	○	○	○	○
Workpiece discharge unit	○	○	●	●	●	○	○	○
Spindle 2	○	○	○	○	○	●	●	●
Turret	○	○	○	●	●	○	●	●
Turret(Milling)	○	○	○	○	●	○	○	●

● : Standard features ○ : Not applicable

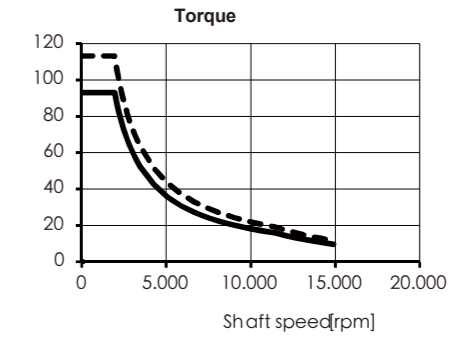
SPECIFICATION & FEATURES FOR MILL-TURN MULTI-FUNCTION MACHINING CENTER

DESCRIPTION	GMTC-168	GMTC-268	GMTC-368	
TRAVEL				
X1-axis (mm/in)	380 / 15	660 / 26	800 / 31	
Y-axis (mm/in)	300 / 12	500 / 20	600 / 24	
Z1-axis (mm/in)	1200 / 47	2200 / 87	3200 / 126	
X2-axis (mm/in)	160 / 6	160 / 6	160 / 6	
A & Z2 - axis (mm/in)	700 / 28	1700 / 67	2700 / 106	
Spindle nose to C-axis center	120~500	120~780	120~920	
Ball Screw for X1, X2, Y, Z2, A axes(dia/Pitch)	40 / 12	40 / 12	40 / 12	
Ball Screw(dia/Pitch Z1)	50 (12)	50 (12)	63 (12)	
WORKING RANGE				
Swing over cross slide(mm/in)	460 / 18	635 / 25	760 / 30	
Max dia of work piece (mm/in)	460 / 18	635 / 25	760 / 30	
Max turning length of work piece (mm/in) (A-axis)	715 / 28	1730 / 68	2720 / 107	
FEEDRATE				
Cutting feed rate(mm/min)	1~10,000(Depend on the controller)	1~10,000(Depend on the controller)	1~10,000(Depend on the controller)	
Rapid traverse (m/min)X1/Y/Z1/X2/Z2/A(Axis)	30/30/20/30/30/30	30/30/20/30/30/30	30/30/20/30/30/30	
TURNING SPINDLE MOTOR (FANUC)				
Spindle 1. Built-in spindle motor (spindle bar 52mm)(OP: 65mm)(A2-6)	αB180M-6000 11/15Kw	αB180M-6000 11/15Kw	αB180M-6000 11/15Kw	
Spindle 2. Built-in spindle motor (spindle bar 65mm)(OP: 85mm)(A2-6)	αB180M-6000 11/15Kw	αB180M-6000 11/15Kw	αB180M-6000 11/15Kw	
TURNING SPINDLE MOTOR (ATE)				
Spindle 1. Built-in spindle motor (spindle bar 52mm)(OP: 65mm)(A2-6)	AC 300/240/8 15KW	AC 300/240/8 15KW	AC 300/240/8 15KW	
Spindle 2. Built-in spindle motor (spindle bar 65mm)(OP: 85mm)(A2-6)	AC 300/240/8 15KW	AC 300/240/8 15KW	AC 300/240/8 15KW	
Bar feeding system	OP	OP	OP	
SERVO MOTOR (FANUC/SIEMENS/HEIDENHAIN)				
X1 axis Spindle (Kw/N-m) Y axis Spindle (Kw/N-m)	F	α30i 5.5 / 30	α30i 5.5 / 30	α30i 5.5 / 30
	S	1FK7101 4.87/27	1FK7101 4.87/27	1FK7101 4.87/27
	H	QSY190C 7.2/28	QSY190C 7.2/28	QSY190C 7.2/28
Z1-axis Spindle (Kw/N-m)	F	α30i 5.5 / 30 W/B	α30i 5.5 / 30 W/B	α30i 5.5 / 30 W/B
	S	1FK7101 4.87/27 W/B	1FK7101 4.87/27 W/B	1FK7101 4.87/27 W/B
	H	QSY190C 7.2/28 W/B	QSY190C 7.2/28 W/B	QSY190C 7.2/28 W/B
X2-axis Motor (Kw/N-m) B-axis for Turret 2 (Kw/N-m)	F	α12 2.5 / 12 W/B	α12 2.5 / 12 W/B	α12 2.5 / 12 W/B
	S	1FK7063 2.29/11 W/B	1FK7063 2.29/11 W/B	1FK7063 2.29/11 W/B
	H	QSY155B 2.9/13 W/B	QSY155B 2.9/13 W/B	QSY155B 2.9/13 W/B
Z2-axis Motor (Kw/N-m) A-axis for Turret 2 (Kw/N-m)	F	α12 2.5 / 12	α12 2.5 / 12	α12 2.5 / 12
	S	1FK7063 2.29/11	1FK7063 2.29/11	1FK7063 2.29/11
	H	QSY155B 2.9/13	QSY155B 2.9/13	QSY155B 2.9/13
DIVIDING CAPACITY				
B-axis spindle dividing (degree)	-120~+120	-120~+120	-120~+120	
Spindle 1 + 2 dividing (degree)	360	360	360	
SPINDLE				
Spindle (Main milling spindle) (RPM) FANUC Bil 112M	(Taper size:HSK-A63) / 13000	(Taper size:HSK-A63) / 13000	(Taper size:HSK-A63) / 13000	
OP: ATE AC/180/150/8 (HSK-A 63)/15000(19Kw/93Nm)	OP	OP	OP	
OP: FANUC Bil 160LL (HSK-A100)/10000(25-30Kw/238Nm)	NA	NA	OP	
OP: ATE DC/160/200/8 (HSK-A100)/10000(26Kw/124Nm)	NA	NA	OP	
Main Spindle (Kw/Nm)	15~18.5 Kw / 64 Nm	15~18.5 Kw / 64 Nm	15~18.5 Kw / 64 Nm	
Encoder	FANUC RCN8380F	FANUC RCN8380F	FANUC RCN8380F	
ATC				
Capacity-standard access. (pcs)	standard:24(Arm) / OP:32/40/60(Tools)	standard:24(Arm) / OP:32/40/60(Tools)	standard:24(Arm) / OP:32/40/60(Tools)	
Tool selection	Bi-directional & min.path	Bi-directional & min.path	Bi-directional & min.path	
Max Tool Diameter W/adjacent tool (mm/in)	ø78 / φ3	ø78 / φ3	ø78 / φ3	
Max Tool Diameter (mm/in)	ø135 / φ5	ø135 / φ5	ø135 / φ5	
Maximum tool weight (kg/lbs)	20/44	20/44	20/44	
Air Power required (kgs/cm²)	6	6	6	
Tool Shank	HSK-A63	HSK-A63	HSK-A63	
Spindle 1&2. turning built-in spindle (RPM)	6000	6000	6000	
· Hydraulic Turret · LS-160 · 8T 240m/m · Boring Tool Ø25 · O.D. Tool □16 · Facing Tool □16				
Machine dimension (cm)	350*228*238	470*270*238	600*400*260	
Machine weight (Kg)	12000	19000	28500	
Package Weight (Kg)	13000	21000	30500	

HSK-A63

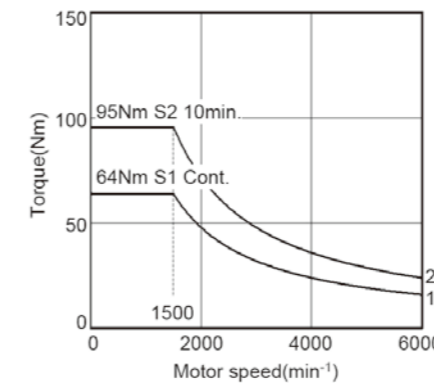


ATE AC/180/150/8

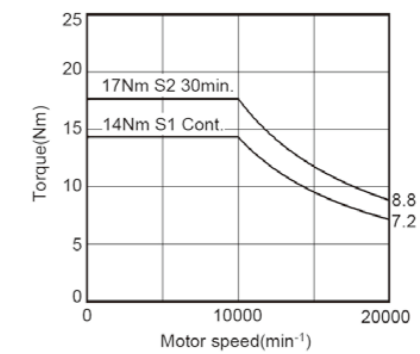


Bil 112M / 20000 (A06B-1673-B100#YNB7) (Option: SIEMENS)

● Low winding



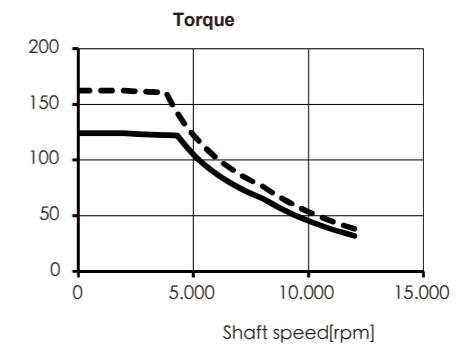
● High winding



HSK-A100

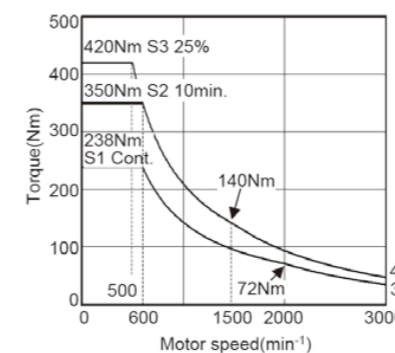


ATE DC/160/200/8



Bil 160LL / 13000 (A06B-1726-B100#ZAB1) (Option: SIEMENS)

● Low winding



● High winding

